California Department of Public Health
Radiation Monitoring Report May 16, 2011

AIR: California Department of Public Health (CDPH) air monitors detected only trace amounts of radiation following the nuclear emergency in Japan. Radiation levels remain below the average amount from natural sources in California.

Air samples from Eureka, Humboldt Bay, Richmond, Livermore, San Luis Obispo, Avila Beach, Los Angeles, San Clemente, and San Diego shown below from April 20 to April 29, 2011 did not detect any radioactive material in air due to the nuclear accident in Fukushima, Japan.

We are exposed to radiation every day, both from natural sources, such as minerals in the ground or radiation from the sun, and from man-made sources such as medical x-rays. The average annual radiation dose per person in the U.S. is 620 millirem.

Sample Station	Date Collected	Results	Element Detected	Concentration Measured (picoCuries per cubic meter of air)	Estimated Radiation Dose per Year (millirem)
Eureka	4/22/11	No Detection			
Humboldt Bay	4/21/11	No Detection			
	4/27/11	No Detection			
Richmond	4/23/11	No Detection			
	4/25/11	No Detection			
	4/28/11	No Detection			
Livermore	4/22/11	No Detection			
	4/25/11	No Detection			
	4/27/11	No Detection			
	4/29/11	No Detection			
San Luis Obispo	4/21/11	No Detection			
	4/23/11	No Detection			
	4/27/11	No Detection			
Avila Beach	4/21/11	No Detection			
	4/23/11	No Detection			
	4/27/11	No Detection			
Los Angeles	4/22/11	No Detection			
San Clemente	4/22/11	No Detection			
	4/27/11	No Detection			
San Diego	4/20/11	No Detection			
	4/27/11	No Detection			

Milk: Trace amounts of radiation was detected in the milk sampled from the San Luis Obispo area.

Sample Station	Date Collected	Results	Element Detected	Concentration Measured (pCi/liter)	Estimated Dose (millirem/week)
CalPoly Dairy Farm	5/2/2011	Detection of:	Iodine-131	4.14	0.016
			Cesium-134	4.55	0.003
			Cesium-137	5.11	0.002

The Iodine-131 concentration level detected in the milk sample is 1,122 times less than standard of the US FDA (4,645 pCi/liter of milk). The resultant dose is approximately 0.016 millirem per week. Further, Iodine-131 has a physical half-life of 8 days, which means Iodine-131 detected in the milk sample decays very quickly. The Cesium-134 concentration in the milk sample is 1,021 times less than standard of the US FDA (4,645 pCi/liter of milk). The resultant dose is approximately 0.003 millirem per week. The Cesium-137 concentration in the milk sample is 909 times less than standard of the US FDA (4,645 pCi/liter of milk). The resultant dose is approximately 0.002 millirem per week.

Notes:
CDPH has air sampling stations in nine locations in California. Samples collected from these stations are analyzed for radioactive elements including Barium-140, Cerium-141, Cerium-144, Cesium-134, Cesium-137, Iodine-131, Iodine-132, Ruthenium-103, Ruthenium-106, Tellurium-132, and Zirconium-95.

Estimated dose is calculated by methods described in Title 10 of the Code of Federal Regulations Part 20, Standards for Protection Against Radiation, Appendix B, Table 2. Dose values for each radionuclide assume the individual will be exposed at this concentration continuously over the course of a year. Information to date indicates that the duration of exposure should not exceed a few weeks.

Link to raw data: http://www.cdph.ca.gov/programs/Documents/CDPH-RHB-PreLabAnalysis-2011-05-16.pdf

Link to Air Sampling Map: http://www.cdph.ca.gov/programs/Documents/CDPH-RHB-SamplingStationMap.pdf